Statement of Work:
7th Floor South Monitoring System
552-12-3-325-0116

Background

- This project is for delivery and installation of a camera monitoring unit for the 7th Floor South (Mental Health/Psych Unit) at the Dayton VAMC.

- The project exists due to the need for new cameras, due to the age of the older ones. The cameras are necessary for employee and Veteran safety.

- There is a mandatory requirement to have a monitoring system on Mental Health/Psych Units.

Objectives

- A monitoring system shall be installed for the use of ensuring patient and employee safety on the 7th floor south of the Dayton VAMC.

- The goals and objectives are to have a working camera/monitoring system by 30 calendar days after contract award.

Scope

- Contractor will provide all cameras, TV monitor, equipment, labor to install a monitoring system on the7th floor south of the Dayton VAMC located at 4100 West Third Street, Dayton, OH 45428-9000.

Tasks or Requirements

- The contractor shall provide all labor, material, and equipment to install sixteen (16) cameras, one (1) mount monitor, and provide training to the Nurse Manager & Staff on the proper use of the system.

Selection Criteria

- Dayton VAMC Camera System requirements:

  A. Minimum of 72 hours of recording available per camera
  B. 8 TB of internal storage
  C. Real-time SD and HD Camera recording
  D. 42 inch HD Color Monitor
  E. Lens capability of spanning 105-110 degrees on each camera
  F. Camera must be programmable
  G. Cameras must mount in the ceiling
  H. A quantity of 21 cameras is being requested.
  I. Cameras are to be installed in a locked psychiatric unit and shall be mounted as to not create a hanging hazard.
  J. Contractor is required to be briefed by Psychiatric Staff prior to the commencement of work to understand special requirements and procedures while in a locked psychiatric unit.

K. Additional electrical outlets will not be provided by the Dayton VAMC.

Deliverables or Deliver Schedule

- Contractor shall provide all materials, labor, and parts to install the system effectively and in working condition.
- The schedule for deliverables: After project award, deliverables of installation of camera system shall be within 30 calendar days of award.
- Contractor shall provide wire and labor to install camera in location where wiring does not currently exist.
- Contractor shall provide "as built" drawing and technical documentation for system components and set-up configuration.

Government-Furnished Equipment and Government-Furnished Information

- The Contractor shall use the current wiring system to install the new camera system. One location will require the installation of a new camera which will require the contractor to run additional wire. The location, type, and amount of wire required for the installation will be provided in the solicitation documents. Contractor can refer to the drawing provided-- the area being referred to is labeled Nurses Station C-21 and C-25.
- The Government will not furnish any equipment to the contractor to install the camera or monitor.

Performance Measure

- Provide a camera monitoring system;
- Properly install the system;
- Provide evidence of acceptable operation of the installed equipment;
- Provide training on the operation and use of the system to selected VA personnel.

Place of Performance

- Work to be performed on the 7th floor South unit at the Dayton VA Medical Center, in Dayton, Ohio. The Nurse Manager and the Chief, Biomed will be the Points of Contact and reference at the Medical Center. Names will be provided upon contract award.

Period of Performance

- Work shall be performed between the hours of 8am and 5pm during all week days, not on Saturdays, Sundays, or Federal Holidays.

BOSCH
Invented for life

Bosch Professional Large Full HD LCD Monitors

- ▸ Support up to 1920 x 1080 Full HD resolution
- ▸ Picture-in-picture (PIP) or split screen function
- ▸ HDMI, DVI, VGA, S-Video inputs
- ▸ Two composite BNC inputs and loop-through outpu
- ▸ Trigger and Auto Switching features
- ▸ High contrast ratio 4,000:1 (UML-262-90) and 3,500:1 (UML-422-90)
- ▸ 178 degree horizontal and vertical viewing angles
- ▸ Color enhancement engine and built-in speaker
- ▸ Anti-image retention mode and Super High Resoluti of 600 TV Lines

The Bosch Professional Large Full HD LCD monitors are 1080p Full HD resolution, color monitors ideal for use with analog video, digital video recorders (DVRs), and with PC applications. The monitors feature a color LCD flat-screen panel and are available with 26-inch or 42-inch viewable picture areas. Each monitor features a wide range of horizontal and vertical viewing angles that provide comfortable, clear viewing – whether you place it on a desktop or mount it to a wall or a ceiling.

True color enhancement

The monitors provide true color performance. The monitors automatically focus on setting the correct colo temperature, and gamma curve settings to deliver the highest possible picture quality.

Super high resolution

The Bosch Professional Large Full HD LCD monitors off 600 TV Lines of resolution to offer a sharp, clear pictur

Functions

Excellent image quality

The Bosch Professional Large Full HD LCD monitors automatically adapt to the input resolution of the incoming video signal, and support up to 1920 x 1080 resolution (Full HD). The monitors' analog VGA input easily accommodates the widespread use of PCs in today's security surveillance systems. Their high contrast ratio (4000:1 or 3500:1) and high brightness rating (450 or 700 cd/m^2) offer excellent color accuracy and imaging for easier viewing and interpretation of images. The panel refreshes every eight milliseconds, so you get crisp, clear images with less smearing - and less image "ghosting" in fast-motion video.

Certifications and Approvals

Region	Certification
Europe	CE

Region	Safety Certification
Canada	cUL
Europe	EN60950, CE Declaration of Conformity, CB scheme
Japan	PSE
USA	UL60950
Electromagnetic Compatibility (EMC)	
Emission	EN55022 class B, FCC part 15 class B
Immunity	EN50130-4 (CE)

Region	Safety Certification

Environmental

Vibration and Shock
Level 5 Energy Star Certificate (UML-422-90 only)

Parts Included

Quant.	Component
1	Bosch Full HD Color LCD Flat Panel Monitor
2	3-wire power cords with a grounded plug 1.8 m (6 ft): one (1) with a European/Continental plug type and one (1) with a U.S. plug type
1	Power adapter (UML-262-90)
1	1 DVI-D to DVI-D cable, 1.8 m (6 ft)
1	1 VGA to VGA (D-Sub), cable, 1.8 m (6 ft)
1	Trigger cable
1	Remote control
2	AAA batteries for remote control
1	Installation Manual (English or Japanese)
1	CD-ROM with multi-language Installation Manual

Technical Specifications

Electrical

	UML-262-90	UML-422-90
Rated Voltage	24 VDC, 5A (monitor) 120/230 VAC, 50/60 Hz (power adapter)	120/230 VAC, 50/60 Hz
Voltage Range	100–240 VAC, 50/60 Hz	
Frequency	Horizontal: 60–73 KHz Vertical: 47–63 Hz	
Power at Rated Voltage		
• On	70 W	210 W
• Active Off	1 W	1 W

Video

	UML-262-90	UML-422-90
Sync Format	PAL/NTSC	PAL/NTSC
LCD Panel	CCFL	CCFL
Viewable Picture Area	26.02 in.	42.02 in
Screen Size (H x V)	576 x 324 mm (22.68 x 12.76 in.)	930.24 x 523.26 mm (36.62 x 20.60 in.)
Pixel Pitch (H x V):	0.3 x 0.3 mm	0.485 x 0.485 mm
Resolution[1]	1920 x 1080	1920 x 1080
Aspect Ratio	16:9	16:9
Display Colors	16.7 million	1,073 million
Response Time	8 ms (typical)	8 ms (typical)

Backlight	50,000 hours (CCFL)	60,000 hours (CCFL)

1. Pixel Policy: Bosch monitors follow the ISO 13406-2 Class II standard.

LCD Panel Optical Characteristics

	UML-262-90	UML-422-90
Luminance	450 cd/m² (typical)	700 cd/m² (typical)
Contrast Ratio	4000:1 (typical)	3500:1 (typical)
Viewing Angle	Horizontal/Vertical: 178°, typical	Horizontal/Vertical:178°, typical

Video Input	All Models
Composite Video (CVBS)	1.0 Vp-p (0.5–1.5 Vp-p), automatic switching from 75 Ohm unbalanced termination to Hi-Z with passive loop-through operation
Y/C (S-video)	0.7 Vp-p (Y-signal), 0.3 Vp-p (C-signal), 75 Ohm termination
Audio Input	2.0 V line level, mono

RGB Timing Modes

	UML-262-90	UML-422-90
640 x 480	60/72/75 Hz	60/72/75 Hz
720 x 400	70 Hz	70 Hz
800 x 600	60/75 Hz	60/75 Hz
1024 x 768	60/75 Hz	6075 Hz
1280 x 1024	60 Hz	60 Hz
1280 x 960	60 Hz	60 Hz
1280 x 1024	60/75 Hz	60/75 Hz
1366 x 768	60 Hz	60 Hz
1440 x 900	60/75 Hz	60/75 Hz
1080p	60 Hz	60 Hz

DVI Timing Modes

	UML-262-90	UML-422-90
640 x 480	60/72/75 Hz	60/72/75 Hz
720 x 400	70 Hz	70 Hz
800 x 600	60/75 Hz	60/75 Hz
1024 x 768	60/75 Hz	60/75 Hz
1280 x 768	60 Hz	60 Hz
1280 x 960	60 Hz	60 Hz
1280 x 1024	60/75 Hz	60/75 Hz
1366 x 768	60 Hz	60 Hz
1920 x 1080	60 Hz	60 Hz
480p	60 Hz	60 Hz
576p	50 Hz	50 Hz
720p	50/60 Hz	50/60 Hz
1080i	50/60 Hz	50/60 Hz
1080p	50/60 Hz	50/60 Hz

HDMI Timing Modes

	UML-262-90	UML-422-90
640 x 480	60/72/75 Hz	60/72/75 Hz
720 x 400	70 Hz	70 Hz
800 x 600	60/75 Hz	60/75 Hz

1024 x 768	60/75 Hz	60/75 Hz
1280 x 768	60 Hz	60 Hz
1280 x 960	60 Hz	60 Hz
1280 x 1024	60/75 Hz	60/75 Hz
1366 x 768	60 Hz	60 Hz
1920 x 1080	60 Hz	60 Hz
PAL 576i	50 Hz	50 Hz
NTSC 480i	60 Hz	60 Hz
480p	60 Hz	60 Hz
576p	50 Hz	50 Hz
720p	50/60 Hz	50/60 Hz
1080i	50/60 Hz	50/60 Hz
1080p	50/60 Hz	50/60 Hz
Audio Input	2.0 V line level, mono	

Controls

Input	All Models
Control Panel	Push-buttons
Input	Selects: Video1, Video2, S-video, VGA, HDMI, DVI-D
Menu	Selects on-screen display (OSD), up cursor, down cursor/auto adjust, left cursor, right cursor
Power	On/Off
Control Panel Lockout	Multiple push-button combination

On-screen Display	All Models
Video Mode	Input Source, Screen, OSD, Utility

Indicators	All Models
LED	Power On (green) Power Off, Standby (red)
On-screen	VGA: Check input signal Video: Flashes "AV1" or "AV2" when there is a black screen

Connectors	All Models
Video 1 (AV1)	Composite video: two (2) BNC (1 in, 1 out)
Video 2 (AV2)	Composite video: two (2) BNC (1 in, 1 out)
Digital	Two (2) DVI-I
HDMI	One (1)
VGA	One (1) RGB 15-pin D-sub in
Y/C (S-video)	One (1) mini-DIN, 4-pin (1 in)
Audio	One (1) RCA IN (right/left).
Trigger Input	One (1) 1/8 in. mini phono plug
Power Input	
• UML-262-90	Mini-DIN 4P DC input jack
• UML-422-90	IEC C-14 connector

Connectors	All Models
Power Adapter	Model: STD 24050 (included with UML-262-90)
• Input	100–240 VAC, 50/60 Hz
• Output	24 VDC, 5 A

Mechanical

	All Models
Cabinet Material	ABS plastic
Finish	Black
Mount	Wall mounting compatible with standard bracket

	UML-262-90	UML-422-90
VESA Mounting Compliance	100 x 100 mm, or 100 x 200 mm	400 x 200 mm
Dimensions (W x H x D)		
• Monitor	632 x 388.1 x 211.1 mm (24.9 x 15.3 x 8.3 in.)	932 x 536 x 119.7 mm (36.7 x 21.1 x 4.7 in.)
• With Packaging	722 x 544 x 302 mm (28.4 x 21.4 x 11.9 in.)	1115 x 707 x 275 mm (43.9 x 27.8 x 10.8 in.)
Weight		
• Monitor Weight	11.3 kg (24.91 lb)	24.8 kg (54.67 lb)
• Shipping Weight	14.0 kg (30.86 lb)	29.0 kg (63.93 lb)

Environmental

	All Models
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	−20°C to 60°C (−4°F to 140°F)
Humidity	Maximum 90% relative, non-condensing

Ordering Information

UML-262-90 26-inch Full High-Definition LCD Monitor 26-in. 1080p LCD CCFL monitor with RGB, DVI, and HDMI inputs	UML-262-90
UML-422-90 42-inch Full High-Definition LCD Monitor 42-in. 1080p LCD CCFL monitor with RGB, DVI, and HDMI inputs	UML-422-90
Accessories	
UMM-LW-20B Fixed Wall Mount Fixed wall mount for flat panel LCD monitors, black	UMM-LW-20B
UMM-LW-30B Swivel/Tilt Wall Mount Swivel/Tilt wall mount for flat panel LCD monitors, black	UMM-LW-30B
ST660 Universal Tilt Wall Mount Tilt wall mount for an LCD 32 in. to 60 in., black	ST660

700 Series Hybrid/Network HD Recorder

www.boschsecurity.com

BOSCH
Invented for life

- ▶ Real-time HD and SD camera recording
- ▶ 32 channels for IP and analog cameras
- ▶ Automated IP assignment and management
- ▶ Up to 8 TB of internal storage
- ▶ Video synchronized to text sources

The Bosch 700 Series Hybrid and Network HD Recorders offer top-of-the-line performance and adaptability. Equipped with four front-replaceable hard drives and extensive integration features, the 700 Series is ideal for medium to large-scale systems. The 700 Series' superior image quality and compression gets the most out of CCTV images. Available in both IP-only and hybrid models, the 700 Series can handle even the most challenging CCTV applications without excessive demands on installers or operators.

Functions

High performance H.264
With recording of 1080p30 and 720p60 IP cameras, as well as SD and analog 4CIF cameras, 700 Series Recorders capture all the details. More detail typically means increased bandwidth, larger storage requirements, and increased costs — but not with the 700 Series. Bosch's advanced H.264 compression technology used in the 700 Series reduces bandwidth and storage needs by up to 30% or more compared to traditional MPEG-4 systems.

Viewing and playback
View live images of analog and IP SD cameras on the local monitor as full-screen or multi-screen displays. The extensive search options make it easy to find and playback the recorded images from these cameras locally.
The supplied Bosch Video Client software allows you to remotely display live and recorded video in 4CIF, SD and HD resolution.

Embedded design
The embedded design of the 700 Series Recorder offers a higher level of security against network attacks than traditional systems and has lower maintenance requirements. The security of recordings remains high while eliminating the need to install software patches and anti-virus updates. The integrated architecture, built-in installation wizards, and low-maintenance design make the 700 Series easy to set up and operate while delivering a lower total cost of ownership.

Hybrid Models
The world of CCTV is changing — IP is replacing the analog standard in many areas. Bosch's 700 Series Recorders have the flexibility to adapt to this changing environment.

The 700 Series Hybrid Recorder is the ideal choice for growing applications which use a mix of analog and IP cameras. It can record 8 or 16 analog cameras and an additional 8 or 16 IP channels.
Hybrid models with 8 or 16 IP channels have 36 Mbit/s of bandwidth available in total for video streams from IP cameras.

Network Models
The 700 Series Network Recorder is the perfect match for pure IP environments. Network recorder models have 72 Mbit/s of bandwidth available in total.
While typical IP solutions consist of many separate components — NVR Server, PC Client, external RAID storage array and software — the 700 Series Network Recorder is an all-in-one IP video management solution.
With support for a total of 32 H.264 cameras and a fully automated, onboard IP camera management system, 700 Series is easy to set up and maintain right out-of-the-box.

Power to integrate
Bosch's VideoSDK provides a complete toolbox of modules for playback, searching, viewing live images and more — simplifying integration with other surveillance systems. The VideoSDK even allows integration with specialized software tools such as fraud detection programs for retail applications.
Control of 700 Series Recorders can be automated using CLI (Command Language Interface) commands. This allows the 700 Series to be interfaced with external software (over RS232 or IP), which is typically used to sense alarms or handle access control on an existing (embedded) computer system. Functions include front panel emulation, configuration, and viewing status information.

Text data
There is extensive support for recording text data from external sources (such as ATM machines, license plate readers, positioning systems or cash registers) together with the associated video.
Live text data can be viewed locally and remotely together with the video synchronized to it. Searching text data allows fast retrieval of the relevant video and provides legal evidence in the event of fraud.

Flexible and reliable storage
Access the four internal hard drives via the front without opening the unit, thus simplifying service and making it easy to add additional storage on-site when needed. Configure the disks as a RAID 4 array for extra reliability.
Expand storage further with an external Bosch iSCSI video storage array. This makes the 700 Series ideal for applications requiring continuous recording at the highest resolution, frame rate, and retention time.

Ease of use
Find key events in recorded video quickly by utilizing the unit's smart search to find changes only in selected areas. Compare past and present events by simultaneously viewing live images with playback scenes.
Export recordings by simply downloading them to a USB memory device, burning them to the optional built-in DVD recorder, or exporting them remotely via the Bosch Video Client or Control Center software. The 700 Series makes it easy to manage and transport images. Exports in Bosch format are watermarked to ensure the authenticity of the recordings. These can be played back on the recorder unit itself. ASF exports can be played on any PC with a suitable media player.

Intuitive user interface
The unit's intuitive interface with clear, menu-driven options is quick to learn and easy to use. Choose from a selection of control devices, including a mouse or CCTV keyboard. With the keyboard loop-through feature, up to sixteen 700 Series Recorders can be controlled from a single IntuiKey keyboard.
Flexibility is also abundant with its extensive range of advanced functionality. Other convenient features include remote playback capability and dual VGA monitor support. Live viewing, playback, configuration, remote management — it is all simple and straightforward with the 700 Series.

Comprehensive interfaces
Flexible interface options make it easy to connect to a variety of external devices.
- Up to 16 analog video inputs and 16 IP camera inputs on hybrid models, or up to 32 IP camera inputs on IP-only models. Both SD and HD cameras are supported.
- Up to 16 audio inputs(DHR Models only) and two dual-mono audio outputs
- One or two monitor (DHR models only) outputs on VGA, CVBS, and Y/C outputs
- Up to 4 front-replaceable hard disks with optional RAID-4 support
- One or two Ethernet 10/100/1000 BaseT network connections
- Up to 16 alarm inputs and 5 relay outputs
- Biphase connection allows one cable to control Bosch PTZ cameras at a range of up to 1.5 km / 0.9 miles
- Bosch (OSRD protocol) and third-party (Pelco D and P protocols) PTZ control via RS422/RS485 connection
- Bosch IntuiKey support with loop-through function
- Bosch Video Manager support (including Keyboard Expander LTC2604/x0)
- USB connectors front and back — connect a mouse to control the user interface or archive video to a USB memory stick
- Optional built-in DVD recorder
- Text data interface directly from IP source or from a bridge device

Applications

The 700 Series Recorder is ideal for:

- Shopping centers and retail applications
- Banks and financial institutions
- City centers and public monitoring applications
- Crowd surveillance
- Casinos and hotel complexes

Certifications and Approvals

Electromagnetic compatibility

|	
USA	FCC Part 15, Class B
EU	EMC directive 2004/108/EC
Immunity	EN50130-4
Emission	EN55022 Class B
Mains Harmonics	EN61000-3-2
Voltage fluctuations	EN61000-3-3
Alarm standard	EN50130-5:1998
Railway applications	EN50121-4:2006

Safety	
USA	UL60950-1
EU	EN60950-1
Can	CSA C22.2 No. 60950-1

Region	Certification
Europe	CE
USA	FCC

Installation/Configuration Notes

Recommended requirements for PC application

Operating system	Windows XP or 7
	DirectX 9c
Processor	Intel Pentium DualCore, 3.0 GHz or comparable
RAM memory	2048 MB or more
Free disk space	10 GB
Graphics card	NVIDIA GeForce 8600 or higher
Network interface	10/100/1000 BaseT
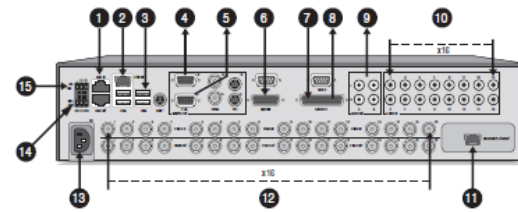
1	Keyboard input and looped-through output	9	Audio outputs
2	Ethernet	10	Audio inputs
3	USB ports	11	Secondary Ethernet (2 GigE versions)
4	B monitor connections (VGA, CVBS, Y/C)	12	Camera loop through
5	A monitor connections (VGA, CVBS, Y/C)	13	Power input
6	Biphase connection	14	Malfunction alarm output
7	Alarm inputs	15	RS485 port
8	Alarm outputs		
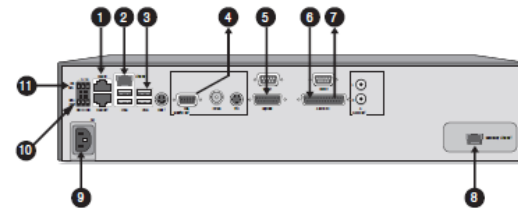
1	Keyboard input and looped-through output	7	Alarm outputs
2	Ethernet	8	Secondary Ethernet (2 GigE versions)
3	USB ports	9	Power input
4	Monitor connections (VGA, CVBS, Y/C)	10	Malfunction alarm output
5	Biphase connection	11	RS485 port
6	Alarm inputs		

Parts Included

Quantity	Component
1	Divar 700 Series HD Recorder
2	Power supply cords
1	USB mouse
1	CD-ROM containing the software and manuals
1	Quick installation guide

1	Installation and operation manual
1	Divar 700 Series Archive Player operation manual

Technical Specifications

Electrical

Rated Voltage and Power

Power input	100 to 240 VAC; 50/60 Hz
Power consumption	Max. 2.5 to 1.0 A (250 Watt) 835 BTU/h Able to withstand power dips up to 100 MS, assuring continuous operation

Video

Video standard	PAL or NTSC auto-detection
Resolution	704x576 PAL, 704x480 NTSC
Compression	H.264
Inputs	8 or 16 composite video 0.5 to 2 Vpp, 75 ohm automatic termination
Outputs	8 or 16 composite video 1 Vpp, 75 ohm, sync 0.3 V ± 10%

Audio

Inputs	8 or 16 line in (DHR models only), mono RCA, 1 Vpp, 10 kohm
Output	2 line out, dual mono RCA, 1 Vpp, 10 kohm
Compression	MPEG-1 layer II
Sampling rate	24 kHz per channel

Monitors

MON-A	Live, playback, menus
	VGA: analog RGB 1280x1024, 60/75 Hz (NTSC/PAL)
	CVBS: 1 Vpp, 75 ohm, BNC
	Y/C
MON-B (Hybrid models only)	Live
	VGA: analog RGB 1024x768, 60/75 Hz (NTSC/PAL)
	CVBS: 1 Vpp, 75 ohm, BNC
	Y/C

Display Modes

Monitor A	Full, full sequence, quad, multi-screen (live and playback), event call-up (live)
Monitor B (Hybrid models only)	Full, full sequence, quad, multi-screen, event call-up (live)

Frame rate PAL/ NTSC	25/30 IPS per channel (real time)
Multi-screen mode 8 channels	1, 2x2, 3x3 (showing 8 channels)
Multi-screen mode 16 channels	1, 2x2, 3x3, 4x4
Zoom	1.5x, 2x, 3x, 5x
Display languages	Chinese (Simplified), Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Turkish.

Alarm Handling

Inputs	Screw terminal, 8 or 16 inputs, configurable NO/NC,
	Max. input 40 VDC
Outputs	Screw terminal 4 relay outputs, configurable NO/NC, max. rated 30 VAC, 40 VDC, 0.5 A, continuous -10 VA
Remote notification	Via Control Center software
Malfunction relay	Temperature related failures, Voltage ratings, Disk failures

Connections

Ethernet	1 or 2 RJ45 modular jack, 8 pins shielded:
	10/100/1000 Base-T
Biphase	Screw terminal connector (5 outputs)
	Maximum 5 controllable cameras per Biphase output
	Impedance 128 ohm, max. overvoltage protection ±40 V, max. cable length 1.5 km (0.9 miles)

Note: LTC 8785 translator needed for fixed-speed receivers/drivers

PTZ control interface	RS485
Serial interface	RS232 output signals according to EIA/ TIA-232 F, max. input voltage ±25 V
	2xDB-9 male connector
Intuikey keyboard (KBD Digital or KBD Universal)	Conforms to RS485, max. signal voltage ±12 V, power supply to keyboard 11 to 12.6 VDC at max. 400 mA
	RJ11 modular jack 6 pins
USB	Five USB 2.0 ports
10/100/1000 Base-T network interfaces (max 2)	Connect with Bosch iSCSI Video Storage Arrays

Network

Bandwidth control	0.1-100 Mbps limiter

Remote users	Maximum 7 simultaneously connected Control Center users
Protocol support	TCP/IP, DHCP, DNS, and SNTP
IP cameras	Up to 16 IP H.264 for DHR models (optional) Up to 32 IP H.264 cameras for DNR models (optional)
Supported IP H.264 devices	Dinion, FlexiDome, AutoDome Modular, EX series IP cameras, VIP X series encoders (running firmware 3.7 or later, and AutoDome Easy IP

Storage

Internal HDD	500 GB, 1 or 2 TB per disk Up to 4 hard disks
Redundancy	RAID-4 (4 hard disks plus optional license required) Effective storage = Smallest disk x 3

Exporting

DVD	Built-in DVD+R/RW recorder (optional)
USB	Flash memory or external HDD (FAT32)
Network	Bosch Video Client or Control Center Software

Security

Password protection	Multi-level
Image authentication	All recordings and archives in native file format

Record Frame Rate

NTSC	Up to 30 IPS per channel at 352x240, 704x240 and 704x480
PAL	Up to 25 IPS per channel at 352x288, 704x288 and 704x576
IP Channels	Up to 25/30 IPS per channel at 4CIF, 720p60 and 1080p30

Recording

Overwrite modes	Continuous, overwrite after 1 to 99 days
Pre-alarm recording	Up to 120 s

Playback

Playback function	Fast forward/reverse, frame forward/reverse, freeze
Zoom	1.5x, 2x, 3x, 5x
Search mode	Date/time, Event (motion, input), Text, Smart Search

Mechanical

Dimensions (W x D x H) (excluding cabling)	446 x 443 x 88 mm (17.6 x 17.4 x 3.5 in)
Weight (incl. 4 hard disks)	Approx. 11 kg / 24 lbs
Rack mount kit (included)	For mounting one unit in an EIA 19" rack

Environmental

Operating temperature	+5 °C to +45 °C (+41 °F to +113 °F)
Storage temperature	-25 °C to +70 °C (-13 °F to +158 °F)
Relative humidity	Operating: <93 % non-condensing
	Storage: <95 % non-condensing

Model options

	Hybrid/ IP	AN. CH	IP CH st/max
DHR-730-08B XXX	Hybrid	8	0/8
DHR-732-08B XXX	Hybrid	8	0/8
DHR-751-16B XXX	Hybrid	16	0/16
DHR-753-16B XXX	Hybrid	16	0/16
DHR-754-16B XXX	Hybrid	16	0/16
DNR-732-08B XXX	IP only	0	8/16
DNR-753-16B XXX	IP only	0	16/32
DNR-754-16B XXX	IP only	0	16/32

	DIGI in/out	DVD	GigE
DHR-730-08B XXX	8/5		1
DHR-732-08B XXX	8/5	x	1
DHR-751-16B XXX	16/5		1
DHR-753-16B XXX	16/5	x	1
DHR-754-16B XXX	16/5	x	2
DNR-732-08B XXX	8/5	x	1
DNR-753-16B XXX	16/5	x	1
DNR-754-16B XXX	16/5	x	2

XXX	Model storage options:
000	0000 GByte HDD
050	0500 GByte HDD (1 drive)
200	2000 GByte HDD (1 drive)
400	4000 GByte HDD (4 drives)
800	8000 GByte HDD (4 drives)

Note: RAID operation requires a 4-drive system and a DXS-ESRAID-A e-license.

Ordering Information

DHR-730-08B000 Digital Hybrid HD Recorder
730 Series DHR, 1 GigE, 8 CH, 0 GB
Order number **DHR-730-08B000**

DHR-732-08B000 Digital Hybrid HD Recorder
730 Series DHR, DVD, 1 GigE, 8 CH, 0 GB
Order number **DHR-732-08B000**

DHR-730-08B050 Digital Hybrid HD Recorder
730 Series DHR, 1 GigE, 8 CH, 500 GB
Order number **DHR-730-08B050**

DHR-732-08B050 Digital Hybrid HD Recorder
730 Series DHR, DVD, 1 GigE, 8 CH, 500 GB
Order number **DHR-732-08B050**

DHR-730-08B200 Digital Hybrid HD Recorder
730 Series DHR, 1 GigE, 8 CH, 2 TB
Order number **DHR-730-08B200**

DHR-732-08B200 Digital Hybrid HD Recorder
730 Series DHR, DVD, 1 GigE, 8 CH, 2 TB
Order number **DHR-732-08B200**

DHR-730-08B400 Digital Hybrid HD Recorder
730 Series DHR, 1 GigE, 8 CH, 4 TB
Order number **DHR-730-08B400**

DHR-732-08B400 Digital Hybrid HD Recorder
730 Series DHR, DVD, 1 GigE, 8 CH, 4 TB
Order number **DHR-732-08B400**

DHR-730-08B800 Digital Hybrid HD Recorder
730 Series DHR, 1 GigE, 8 CH, 8 TB
Order number **DHR-730-08B800**

DHR-732-08B800 Digital Hybrid HD Recorder
730 Series DHR, DVD, 1 GigE, 8 CH, 8 TB
Order number **DHR-732-08B800**

DHR-751-16B000 Digital Hybrid HD Recorder
750 Series DHR, 1 GigE, 16 CH, 0 GB
Order number **DHR-751-16B000**

DHR-753-16B000 Digital Hybrid HD Recorder
750 Series DHR, DVD, 1 GigE, 16 CH, 0 GB
Order number **DHR-753-16B000**

DHR-754-16B000 Digital Hybrid HD Recorder
750 Series DHR, DVD, 2 GigE, 16 CH, 0 GB
Order number **DHR-754-16B000**

DHR-751-16B050 Digital Hybrid HD Recorder
750 Series DHR, 1 GigE, 16 CH, 500 GB
Order number **DHR-751-16B050**

DHR-753-16B050 Digital Hybrid HD Recorder
750 Series DHR, DVD, 1 GigE, 16 CH, 500 GB
Order number **DHR-753-16B050**

DHR-754-16B050 Digital Hybrid HD Recorder
750 Series DHR, DVD, 2 GigE, 16 CH, 500 GB
Order number **DHR-754-16B050**

DHR-751-16B200 Digital Hybrid HD Recorder
750 Series DHR, 1 GigE, 16 CH, 2 TB
Order number **DHR-751-16B200**

DHR-753-16B200 Digital Hybrid HD Recorder
750 Series DHR, DVD, 1 GigE, 16 CH, 2 TB
Order number **DHR-753-16B200**

DHR-754-16B200 Digital Hybrid HD Recorder
750 Series DHR, DVD, 2 GigE, 16 CH, 2 TB
Order number **DHR-754-16B200**

DHR-751-16B400 Digital Hybrid HD Recorder
750 Series DHR, 1 GigE, 16 CH, 4 TB
Order number **DHR-751-16B400**

DHR-753-16B400 Digital Hybrid HD Recorder
750 Series DHR, DVD, 1 GigE, 16 CH, 4 TB
Order number **DHR-753-16B400**

DHR-754-16B400 Digital Hybrid HD Recorder
750 Series DHR, DVD, 2 GigE, 16 CH, 4 TB
Order number **DHR-754-16B400**

DHR-751-16B800 Digital Hybrid HD Recorder
750 Series DHR, 1 GigE, 16 CH, 8 TB
Order number **DHR-751-16B800**

DHR-753-16B800 Digital Hybrid HD Recorder
750 Series DHR, DVD, 1 GigE, 16 CH, 8 TB
Order number **DHR-753-16B800**

DHR-754-16B800 Digital Hybrid HD Recorder
750 Series DHR, DVD, 2 GigE, 16 CH, 8 TB
Order number **DHR-754-16B800**

DNR-732-08B000 Digital Network HD Recorder
730 Series DNR, DVD, 1 GigE, 8 CH, 0 GB
Order number **DNR-732-08B000**

DNR-732-08B050 Digital Network HD Recorder
730 Series DNR, DVD, 1 GigE, 8 CH, 500 GB
Order number **DNR-732-08B050**

DNR-732-08B200 Digital Network HD Recorder
730 Series DNR, DVD, 1 GigE, 8 CH, 2 TB
Order number **DNR-732-08B200**

DNR-732-08B400 Digital Network HD Recorder
730 Series DNR, DVD, 1 GigE, 8 CH, 4 TB
Order number **DNR-732-08B400**

DNR-732-08B800 Digital Network HD Recorder
730 Series DNR, DVD, 1 GigE, 8 CH, 8 TB
Order number **DNR-732-08B800**

DNR-753-16B000 Digital Network HD Recorder
750 Series DNR, DVD, 1 GigE, 16 CH, 0 GB
Order number **DNR-753-16B000**

DNR-754-16B000 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 0 GB
Order number **DNR-754-16B000**

DNR-753-16B050 Digital Network HD Recorder
750 Series DNR, DVD, 1 GigE, 16 CH, 500 GB
Order number **DNR-753-16B050**

DNR-754-16B050 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 500 GB
Order number **DNR-754-16B050**

DNR-753-16B200 Digital Network HD Recorder
750 Series DNR, DVD, 1 GigE, 16 CH, 2 TB
Order number **DNR-753-16B200**

DNR-754-16B200 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 2 TB
Order number **DNR-754-16B200**

DNR-753-16B400 Digital Network HD Recorder
750 Series DNR, DVD, 1 GigE, 16 CH, 4 TB
Order number **DNR-753-16B400**

DNR-754-16B400 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 4 TB
Order number **DNR-754-16B400**

DNR-753-16B800 Digital Network HD Recorder
750 Series DNR, DVD, 1 GigE, 16 CH, 8 TB
Order number **DNR-753-16B800**

DNR-754-16B800 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 8 TB
Order number **DNR-754-16B800**

Accessories

DHR-XS200-A 700 Series Storage Expansion 2 TB
2 TB storage expansion kit
Order number **DHR-XS200-A**

REG-SENTRY-00-1EU REG Sentry Access Control
Access Control REG Sentry-00, No Camera, EU only
Order number **REG-SENTRY-00-1EU**

REG-SENTRY-X-1EU REG Sentry Access Control
Access Control REG Sentry-X, 16 mm PAL, EU only
Order number **REG-SENTRY-X-1EU**

Software Options

DXS-ESIP01-A 700 Series E-License 1 IP
700 Series e-license 1 IP
Order number **DXS-ESIP01-A**

DXS-ESIP04-A 700 Series E-License 4 IP
700 Series 4 IP e-license
Order number **DXS-ESIP04-A**

DXS-ESIP08-A 700 Series E-License 8 IP
700 Series 8 IP e-license
Order number **DXS-ESIP08-A**

DXS-ESRAID-A 700 Series E-License RAID
700 Series RAID e-license
Order number **DXS-ESRAID-A**

DXS-EText-A 700 Series E-License Text
700 Series Text e-license
Order number **DXS-EText-A**

DHR-SIP01A Divar XF License 1 IP
Order number **DHR-SIP01A**

DHR-SIP04A Divar XF License 4 IP
Order number **DHR-SIP04A**

DHR-SIP08A Divar XF License 8 IP
Order number **DHR-SIP08A**

DHR-SRAID Divar XF License RAID
Order number **DHR-SRAID**

BOSCH
Invented for life

VDN-498 Series FlexiDome 2X Dome Camera

▶ **20-bit Image Processing Technology**
▶ **CCD sensor with Wide Dynamic Range**
▶ **Dynamic engine with Smart BLC**
▶ **Detail enhancement**
▶ **True Day/Night performance with switchable filter**
▶ **High impact, vandal-resistant, weatherproof housing**
▶ **Patented dome shape for 90º vertical view**

The FlexiDome 2X Day/Night camera is the ultimate solution for virtually any indoor or outdoor surveillance application. This vandal-resistant dome camera uses a 1/3-inch, wide dynamic range CCD sensor and incorporates advanced (20-bit) digital signal processing for outstanding picture performance.

The 20-bit image processing enhances sensitivity; the 2X-Dynamic extends the dynamic range. This unique combination provides a sharper, more detailed image with outstanding accuracy in color reproduction even under harsh lighting conditions.

The cast-aluminum housing, polycarbonate dome, and hardened inner liner can withstand the equivalent of 55 kg (120 lbs) of force. The enclosure contains the full-featured camera and integral varifocal lens. Ideal for outdoor use, the cameras are protected against water and dust to IP 66 (NEMA-4X) standards. The camera enclosure provides the extra protection necessary for applications such as schools, banks, prisons, parking garages, retail and industrial buildings.

Installation is quick and easy, as the camera comes completely assembled and ready to use. Using the proprietary pan/tilt/rotation mechanism, installers can select the exact field of view. Mounting options are numerous, including surface, 4S (USA), wall, corner and suspended ceiling. The compact, sleek design and virtually flush-mount appearance complements any decor.

The FlexiDome 2X camera is an ideal solution for many surveillance applications, even under the most challenging lighting conditions. The day/night feature ensures the highest image quality possible at any time. Depending on the available light the camera will automatically switch from color to monochrome.

All FlexiDome cameras are supplied ready to operate. Six distinct pre-programmed operational modes are stored in the camera. Recall the mode that suits your application for optimized performance.

Functions

Detail in Extreme Lighting

In harsh lighting, the difference between the brightest and the darkest parts of a scene can be extreme. To produce a clear picture in these conditions, the CCD sensor in the FlexiDome 2X generates two images; one long exposure to resolve details in the scene's darkest areas, and one short exposure to resolve details in the scene's brightest areas. The Digital Signal Processor (DSP) of the FlexiDome 2X combines these dual shutter images, mixing pixels from each exposure to produce the most detailed image possible.

20-bit Image Processing

The highly accurate digital signal processing optimally captures the detail in both bright highlights and deep shadows simultaneously. By combining 20-bit image processing and wide dynamic range, the FlexiDome 2X maximizes the information visible in the picture even with strong backlighting.

Wide Dynamic Range

The superior wide dynamic range handling for all lighting conditions reveals details previously unseen.

2X-Dynamic and SmartBLC

Using 2X-Dynamic technology, pixel-by-pixel analysis provides the user with the most detailed information. Turn on SmartBLC to automatically compensate the image without the need for complicated set-up or without compromising dynamic range.

Detail Enhancement

Features such as Autoblack and Sharpness further improve the details in a scene, pixel by pixel.

Day/Night Mode

The day/night mode provides enhanced night viewing by increasing the IR sensitivity. The IR filter can switch from color to monochrome automatically by either sensing the illumination level or via the alarm input. The filter can be switched manually via the alarm input, through the camera menu or via the Bilinx coaxial control interface. An internal through-the-lens IR detector enhances the monochrome mode stability, as it prevents reverting to the color mode when IR illumination is dominant. IR contrast is also measured and used to handle reflected IR light in outdoor scenes.

Privacy masking

Four different privacy zones allow specific parts of a scene to be blocked. Pre-program any part of the scene to be masked.

Default Shutter

The default shutter speed captures fast moving objects when sufficient light is available. When light levels fall and other adjustments have been exhausted, the shutter speed reverts to a standard setting to maintain sensitivity.

Bilinx Technology

Bilinx is a bidirectional communication capability embedded in the video signal of all Bosch FlexiDome cameras. Technicians can check status, change camera settings and even update firmware from virtually anywhere along the video cable. Bilinx reduces service and installation time, provides for more accurate set-up and adjustment, and improves overall performance. In addition, Bilinx uses the standard video cable to transmit alarm and status messages, providing superior performance without additional installation steps.

Ease of installation

Several features are available that make installation easy:

- Video connection BNC on flying lead
- Power connection on flying leads
- A built-in test pattern generator produces signals to test and fault-find cables.
- A multi-language On-Screen Display (OSD) increases user compatibility.

Programmable Modes

Six independent, pre-programmed operating modes support typical applications, but are fully programmable for individual situations. Switching between modes is easy via Bilinx or the external alarm input.

High efficiency

A high efficiency power supply improves maximum operating temperature.

Video Motion Detection

The built-in video motion detector allows you to select a programmable area with individual thresholds. The global scene change detector minimizes false alarms caused by sudden lighting condition changes, such as switching on or off the indoor or security lighting. When motion is detected, alarms can be displayed in the video signal, the output relay can be closed or an alarm message can be transmitted via Bilinx.

SensUp Dynamic

By increasing the integration time up to 10 times on the CCD, the effective sensitivity is dramatically enhanced. This is especially useful when relying only on moonlight for illumination.

Lens Options

With the FlexiDome 2X dome camera, there is no compromise between scene coverage and aesthetics of the camera. The camera brings the widest choice of lens selection. Choose lenses between 2.8 to 10 mm for wide coverage, 9 to 22 mm VF lens for standard coverage, or 6 to 50 mm for long-rang coverage.

Typical applications

- Entrance foyer/lobby with glass
- Warehouses and loading bays
- Prisons and correctional facilities
- Airport locations including:
  - baggage handling
  - fuel and equipment storage
- Stadium

Certifications and Approvals

Region	Certification	
Europe	CE	Declaration of Conformity
USA	UL	
	FCC	Declaration of Conformity

**Electro Magnetic Compatibility**

Emission	EN55022 class B, FCC part 15 class B, EN6100-3, EN50121-4
Immunity	EN50130-4 (CE), EN50121-4 (CE)
Vibration	IEC60068-2-6

Safety

UL1950-1, CSA 22.2 No. 950-1, EN60950-1 (CE), UL60950, CAN/CSA No. 60950

## Installation/Configuration Notes

FlexiDome 2X model overview

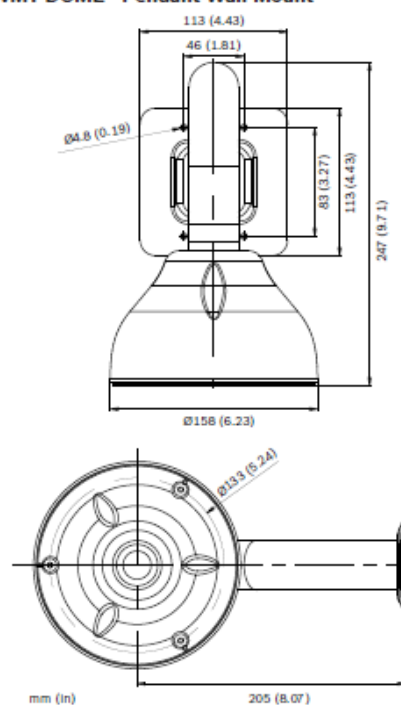| Model	Standard	Lens
VDN-498V03-11	PAL	2.8 to 10 mm F1.2
VDN-498V03-21	NTSC	2.8 to 10 mm F1.2
VDN-498V06-11	PAL	6 to 50 mm F1.6
VDN-498V06-21	NTSC	6 to 50 mm F1.6
VDN-498V09-11	PAL	9 to 22 mm F1.4
VDN-498V09-21	NTSC	9 to 22 mm F1.4

BNC to UTP Transceiver
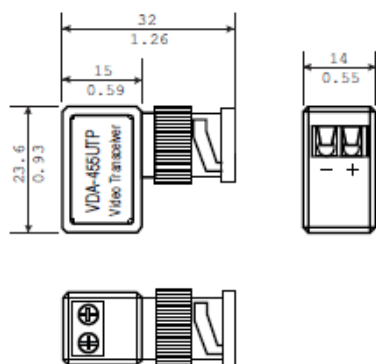
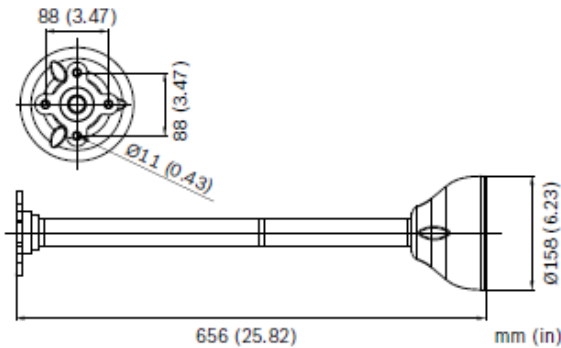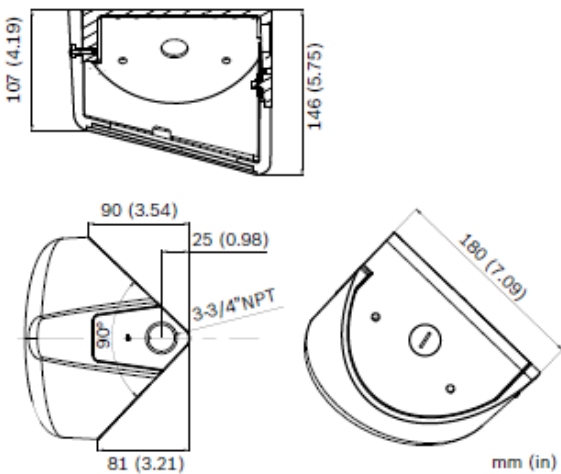*Dimensions in mm (in.)*

Flush Mounting
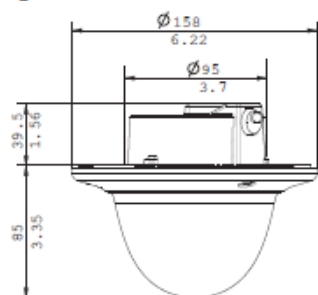
Dimensions in mm (in.)

VDA-455SMB–Surface Mount Box
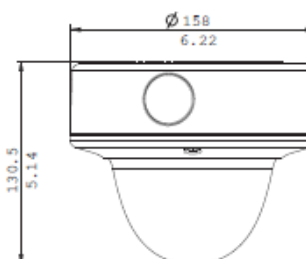
Dimensions in mm (in.) for surface mounting

VDA-WMT-DOME –Pendant Wall Mount

VDA-PMT-DOME –Pendant Pipe Mount

88 (3.47)
88 (3.47)
Ø11 (0.43)
Ø158 (6.23)
656 (25.82)
mm (in)

VDA-CMT-DOME –Corner Mount

107 (4.19)
146 (5.75)
90 (3.54)
25 (0.98)
3-3/4"NPT
90°
81 (3.21)
180 (7.09)
mm (in)

Technical Specifications

Electrical

Model No.	Rated Voltage	Rated Frequency
VDN-498V03/11	24 VAC ±10% 12 VDC ±10%	50 Hz
VDN-498V06/11	24 VAC ±10% 12 VDC ±10%	50 Hz
VDN-498V09/11	24 VAC ±10% 12 VDC ±10%	50 Hz
VDN-498V03/21	24 VAC ±10% 12 VDC ±10%	60 Hz
VDN-498V06/21	24 VAC ±10% 12 VDC ±10%	60 Hz
VDN-498V09/21	24 VAC ±10% 12 VDC ±10%	60 Hz
Power Consumption	400 mA (12 VDC) 350 mA (24 VAC)	
CCD Type	1/3-inch interline, WDR dual shutter	

Active Pixels

PAL Model:	752 x 582
NTSC Model	768 x 494

Sensitivity (3200 K, scene reflectivity 89%, transmission 68%)

	Full video (100 IRE)	Usable picture (50 IRE)	Usable picture (30 IRE)
VDN-498V03 (F1.2)			
Color	2.48 lx (0.23 fc)	0.621 lx (0.058 fc)	0.28 lx (0.027 fc)
Color + SensUp 10x	0.248 lx (0.023 fc)	0.062 lx (0.0058 fc)	0.028 lx (0.0027 fc)
Monochrome	1.01 lx (0.093 fc)	0.23 lx (0.021 fc)	0.099 lx (0.0092 fc)
Monochrome + SensUp 10x	0.1 lx (0.0093 fc)	0.023 lx (0.0021 fc)	0.0099 lx (0.00092 fc)
VDN-498V06 (F1.6)			
Color	3.53 lx (0.356 fc)	0.90 lx (0.09 fc)	0.42 lx (0.042 fc)
Color + SensUp 10x	0.353 lx (0.035 fc)	0.09 lx (0.009 fc)	0.042 lx (0.0042 fc)
Monochrome	1.43 lx (0.144 fc)	0.35 lx (0.035 fc)	0.14 lx (0.014 fc)
Monochrome + SensUp 10x	0.14 lx (0.014 fc)	0.03 lx (0.003 fc)	0.014 lx (0.001fc)
VDN-498V09 (F1.4)			
Color	2.7 lx (0.26 fc)	0.69 lx (0.064 fc)	0.321 lx (0.03 fc)
Color + SensUp 10x	0.27 lx (0.026 fc)	0.069 lx (0.0064 fc)	0.032 lx (0.003 fc)
Monochrome	1.1 lx (0.090 fc)	0.27 lx (0.026 fc)	0.11 lx (0.01 fc)
Monochrome + SensUp 10x	0.11 lx (0.01 fc)	0.027 lx (0.0026 fc)	0.011 lx (0.001fc)

Horizontal Resolution	540 TVL
Signal-to-Noise Ratio	>50 dB
Video Output	Composite video 1 Vpp, 75 ohm
Synchronization	Internal, Line Lock
Shutter	Auto (1/50 [1/60] to 1/10000) selectable Auto (1/50 [1/60] to 1/50000) automatic flickerless, fixed selectable
Sensitivity up	Adjustable from Off up to 10x
Day/Night	Color, Mono, Auto
Auto Black	Automatic continuous, Off
Dynamic engine	XF-Dynamic, 2X-Dynamic, SmartBLC
Dynamic range	120 dB (20-bit image processing)
Dynamic Noise Reduction	Auto, On/off selectable
Sharpness	Sharpness enhancement level selectable
SmartBLC	On (includes 2X-Dynamic) / Off
AGC	AGC On or Off (0 - 30 dB) selectable

Peak White Invert	On/Off
White Balance	ATW, ATWhold and manual (2500 to 10000K)
Alarm Output	VMD or Bilinx
Synchronization	Internal or line lock
Cable Compensation	Up to 1000 m (3000 ft) coax without external amplifiers (automatic set-up in combination with Bilinx coaxial communication)
Camera ID	17 character editable string, position selectable
Test Pattern Generator	Color bars 100%, Greyscale 11-step, Sawtooth 2H, Checker board, Cross hatch, UV plane
Modes	6 preset programmable modes
Remote Control	Bilinx coaxial bi-directional communication
Video Motion Detection	One area, fully programmable
Privacy Masking	Four independent areas, fully programmable
Controls	OSD with soft-key operation (multi-lingual)

Optical

Varifocal	Manual zoom and focus adjustment
Iris control	Automatic iris control
Viewing angle	
2.8 to 10 mm	Wide 100.8 x 73.7° (H x V)
	Tele 28.5° x 21.4° (H x V)
9 to 22 mm	Wide: 31.2° x 22.8° (H x V)
	Tele: 12.8° x 9.6° (H x V)
6 to 50 mm	Wide: 43.4° x 32.4° (H x V)
	Tele: 5.8° x 4.4° (H x V)

Mechanical

Dimensions	See drawings
Weight	740 g (1.63 lb)
Mounting	Flush on hollow surface with three (3) screws in a 4S electrical box
Color	White (RAL9010) trim ring with black inner liner
Adjustment range	360° pan, 90° tilt, ±90° azimuth
Dome bubble	Polycarbonate, clear with UV blocking anti-scratch coating
Trim ring	Aluminum

Environmental

Operating temperature default (with heater off)	-30 °C to +55 °C (-22 °F to +131 °F)
Operating temperature (with heater on)	-50 °C to +55 °C (-58 °F to +131 °F)
Storage temperature	-55 °C to +70 °C (-67 °F to +158 °F)
Operating humidity	5% to 93% relative humidity
Storage humidity	Up to 98% relative humidity
Impact protection	IEC 60068-2-75 test Eh, 50 J

	EN 50102, exceeding IK 10
Water/dust protection	IP 66 and NEMA-4X

Ordering Information

VDN-498V03-11 Vandal Resistant Day/ Night 2X Model 1/3-inch WDR, PAL D/N, 540 TVL, 12 VDC/ 24 VAC, 50 Hz, w/2.8-10 mm F1.2 Varifocal lens, white	**VDN-498V03-11**
VDN-498V03-21 Vandal Resistant Day/ Night 2X Model 1/3-inch WDR, NTSC D/N, 540 TVL, 12 VDC/ 24 VAC, 60 Hz, w/2.8-10 mm F1.2 Varifocal lens, white	**VDN-498V03-21**
VDN-498V06-11 Vandal Resistant Day/ Night 2X Model 1/3-inch WDR, PAL D/N, 540 TVL, 12 VDC/ 24 VAC, 50 Hz, w/6-50 mm F1.6 Varifocal lens, white	**VDN-498V06-11**
VDN-498V06-21 Vandal Resistant Day/ Night 2X Model 1/3-inch WDR, NTSC D/N, 540 TVL, 12 VDC/ 24 VAC, 60 Hz, w/6-50 mm F1.6 Varifocal lens, white	**VDN-498V06-21**
VDN-498V09-11 Vandal Resistant Day/ Night 2X Model 1/3-inch WDR, PAL D/N, 540 TVL, 12 VDC/ 24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal lens, white	**VDN-498V09-11**
VDN-498V09-21 Vandal Resistant Day/ Night 2X Model 1/3-inch WDR, NTSC D/N, 540 TVL, 12 VDC/ 24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal lens, white	**VDN-498V09-21**
VDN-498V03-11S Vandal Resistant Day/ Night 2X Model, Surface Mount 1/3-inch WDR, PAL D/N, 540 TVL, 12 VDC/ 24 VAC, 50 Hz, w/2.8-10 mm F1.2 Varifocal lens, white, surface mount	**VDN-498V03-11S**
VDN-498V03-21S Vandal Resistant Day/ Night 2X Model, Surface Mount 1/3-inch WDR, NTSC D/N, 540 TVL, 12 VDC/ 24 VAC, 60 Hz, w/2.8-10 mm F1.2 Varifocal lens, white, surface mount	**VDN-498V03-21S**
VDN-498V06-11S Vandal Resistant Day/ Night 2X Model, Surface Mount 1/3-inch WDR, PAL D/N, 540 TVL, 12 VDC/ 24 VAC, 50 Hz, w/6-50 mm F1.6 Varifocal lens, white, surface mount	**VDN-498V06-11S**
VDN-498V06-21S Vandal Resistant Day/ Night 2X Model, Surface Mount 1/3-inch WDR, NTSC D/N, 540 TVL, 12 VDC/ 24 VAC, 60 Hz, w/6-50 mm F1.6 Varifocal lens, white, surface mount	**VDN-498V06-21S**

Ordering Information

**VDN-498V09-11S Vandal Resistant Day/
Night 2X Model, Surface Mount**
1/3-inch WDR, PAL D/N, 540 TVL, 12 VDC/
24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal
lens, white, surface mount
— VDN-498V09-11S

**VDN-498V09-21S Vandal Resistant Day/
Night 2X Model, Surface Mount**
1/3-inch WDR, NTSC D/N, 540 TVL, 12 VDC/
24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal
lens, white, surface mount
— VDN-498V09-21S

Accessories

EX12LED-3BD-8M Infrared Illuminator
EX12LED IR Illuminator, 850 nm, 30 deg
beam
— EX12LED-3BD-8M

EX12LED-3BD-8W Infrared Illuminator
EX12LED, IR Illuminator, 850 nm, 60 deg
beam
— EX12LED-3BD-8W

EX12LED-3BD-9M Infrared Illuminator
EX12LED IR Illuminator, 940 nm, 30 deg
beam
— EX12LED-3BD-9M

EX12LED-3BD-9W Infrared Illuminator
EX12LED, IR Illuminator, 940 nm, 60 deg
beam
— EX12LED-3BD-9W

VDA-455SMB
Surface mount box, high impact for
VDC-455, VDM-455, VDC-485, VDN-498,
NDC-455 and NDN-498
— VDA-455SMB

VDA-455UTP
Adaptor for UTP twisted pair output
— VDA-455UTP

S1460 Service/Monitor Cable
for FlexiDome analog and IP (2.5 mm connec-
tor to BNC), 1 m
— S1460

UPA-2410-60 Power Supply
120 VAC, 60 Hz, 24 VAC, 10 VA Out
— UPA-2410-60

UPA-2430-60 Power Supply
120 VAC, 60 Hz, 24 VAC, 30 VA Out
— UPA-2430-60

UPA-2450-60 Power Supply
120 VAC, 60 Hz, 24 VAC, 50 VA Out
— UPA-2450-60

UPA-2420-50 Power Supply
220 VAC, 50 Hz, 24 VAC, 20 VA Out
— UPA-2420-50

UPA-2450-50 Power Supply
220 VAC, 50 Hz, 24 VAC, 50 VA Out
For use with certain 24 VAC camera models.
— UPA-2450-50

VDA-455TBL Tinted bubble
Tinted bubble for FlexiDome series
— VDA-455TBL

VDA-455CBL Clear bubble
Clear Bubble for FlexiDome series
— VDA-455CBL

Ordering Information

**VDA-WMT-DOME Wall Pendant Mount
Bracket**
Wall pendant mount bracket for FlexiDome
cameras
— VDA-WMT-DOME

VDA-CMT-DOME Corner Mount Bracket
Corner mount bracket for FlexiDome cameras
— VDA-CMT-DOME

**VDA-PMT-DOME Pendant Pipe Mount
Bracket**
Pendant pipe mount bracket for FlexiDome
cameras
— VDA-PMT-DOME

Software Options

VP-CFGSFT Configuration Software
for cameras using Bilinx, includes VP-USB
Adaptor
— VP-CFGSFT